

**DEPARTMENT OF THE ARMY  
Vicksburg District, Corps of Engineers  
Vicksburg, Mississippi 39183-3435**

**CELMK-OD-E  
District Pamphlet  
No. 500-2-1**

**Sep 94**

**Emergency Employment of Army and Other Resources  
Flood Emergency Handbook for Local Officials**

- 1. This District Pamphlet (DP) is a ready reference for basic flood fight information, flood fight responsibilities, and procedures for requesting Corps of Engineers assistance.**
- 2. If you have any questions concerning this handbook, please contact our Emergency Management Branch at 601-631-5015.**

**FOR THE COMMANDER:**

**ROBERT P. PETERSEN  
LTC, Corps of Engineers  
Deputy Commander**

**DISTRIBUTION:  
See Appendix E**

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**\* This DP supersedes the Flood Emergency Handbook for Local Officials dated March 1987.**

## DEPARTMENT OF THE ARMY

Vicksburg District, Corps of Engineers  
4155 Clay Street  
Vicksburg, Mississippi 39183-3435

# FLOOD EMERGENCY HANDBOOK FOR LOCAL OFFICIALS

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## CHAPTER 1

### INTRODUCTION

1-1. **OBJECTIVE.** The objective of the Vicksburg District, Corps of Engineers, is to be prepared to supplement levee and drainage districts in responding to flood emergencies. This is accomplished through annual levee inspections, flood fight training, meetings with State and local emergency management officials, and meetings with levee and drainage district officials.

1-2. **PURPOSE.** This handbook is intended to provide a reference source for basic flood fighting information for city and county emergency services, levee and drainage districts, local interest groups, and individuals.

1-3. **SCOPE.** This handbook briefly outlines pertinent emergency information, types of assistance available, where and how to obtain assistance, and flood fight methods and techniques.

#### 1-4. DEFINITIONS.

a. **Flood Stage.** The river stage established by the National Weather Service when appreciable flood damages begin to urban or agricultural properties.

b. **National Weather Service (NWS).** The Federal agency responsible for flood forecasting and dissemination of flood information.

c. **Responsible Local Officials.** County judge, levee board president, mayor, state, county, city, emergency services officials etc.

d. **Gage Reading.** The reading of the actual water height at a gaging station.

e. **National Geodetic Vertical Datum (NGVD).** Refers to elevations at mean sea level.

f. **"ZERO" of Gage.** The benchmark elevation of the gage that is established by survey. The zero is added to the gage reading to obtain the water surface elevation in NGVD.

g. **Headwater Flooding.** Flooding caused by unusual heavy rainfall unable to run off fast enough.

h. **Backwater Flooding.** Flooding caused by water "backing" into an unprotected area from rising major rivers.

i. **Freeboard.** The amount of levee protection above the designed crest of a flood.

j. **Bank Full Stage.** The river stage when the water is at the average natural ground elevation. Some minor flooding of low areas can be expected prior to bank full stage. (See Appendix A for bank full stages)

k. Phase I Mobilization. Preliminary preparation to conduct a flood fight. Activities will include alerting all District personnel concerned in flood fighting operations, review assignments, inspect levee and structures, assess needed support, contact Levee Boards and coordinate release of personnel for flood fight operations and minimum levee patrols.

(See Appendix A for mobilization stages)

l. Phase II Mobilization. Detailed and specific activities to continue the flood fight initiated under Phase I. Activities will consist of activation of sectors, advise Levee Boards, close levees to public and remove cattle as necessary, review and inventory of flood fighting equipment, materials and supplies, and increase levee patrols. (See Appendix A for mobilization stages)

## CHAPTER 2

### GENERAL INFORMATION AND ASSISTANCE

#### 2-1. POLICY.

a. The Vicksburg District is authorized by Public Law 84-99 (PL 84-99) to *supplement* state and local flood fight efforts. Flood fight assistance is temporary; the local officials are responsible for removing any temporary protection. A declaration of a "state of emergency" or "written request" by the Governor of a State, or responsible authority of a political subdivision, is desirable, but not a prerequisite to the Corps' furnishing emergency assistance.

#### b. Assistance Available.

(1) Supplies and Equipment. The Corps of Engineers has a stock of tractor driven pumps, sandbags, visqueen, and other various flood fight materials and equipment for loan during an emergency event and upon request from local officials to the District Engineer. Loans cannot be made for stockpile prior to an event. Stocks loaned are accountable and will be returned or replaced in kind or paid for by local interest to the extent considered feasible by the District Engineer.

(2) Technical Engineering Advice. During major river basin flooding, the Vicksburg District can provide technical advice and engineering services pertaining to flood control projects and the planning and construction of flood fight projects, levee patrol teams,

hydraulic information for pumping requirements, local river conditions and past flood and storm information, survey information, and experienced personnel to assist on location.

(3) Advance Measures. During the early development of a major basin flood, the Governor may request the Vicksburg District to construct a temporary flood control work to protect against loss of life and damages to improved property by flooding if the situation is beyond State capability to respond. Locals are required to remove temporary protection when flood waters recede.

(4) Flood Fight. These actions *supplement* state and local responsibilities and authorities. Requests for assistance should come through the state's emergency management office to assure that state efforts have been initiated and are nearing the limit of state capabilities. In imminent situations, the levee districts may contact the Corps of Engineers directly. Participation by the Corps of Engineers may extend to assumption of a leadership role if responsible local authorities request such assistance.

(5) Post Flood Assistance. A written request from the Governor of a state to the District Commander concurrently with or immediately after

the Governor's request to the Federal Emergency Management Agency (FEMA) for a preliminary damage assessment stating recovery work beyond the capability of the state, identification of specific damaged locations, and specific requirements detailed for Corps assistance. The Corps can assist in major flood or coastal storm disasters resulting in life threatening situations for a period of ten (10) days, provided that a FEMA declaration is not made or denied prior to the beginning of such assistance.

(6) Rehabilitation. The Vicksburg District can repair flood-damaged flood control structures under PL 84-99. A request should be made within 30 days of the end of the flood event. The flood control structure should have a satisfactory maintenance rating and be economically justified to be eligible. (See Appendix C)

2-2. **LOCAL COOPERATION.** For emergency protective work under PL 84-99, local interest are required to furnish the following assurances:

a. Provide without cost to the United States all necessary lands, easements and rights-of-way through or over private property, including borrow and disposal areas and any required relocations.

b. Hold and save the United States free from damages due to authorized construction works, exclusive of damages due to the fault or negligence of the contractor or United States.

c. Maintain and operate all the system after completion in a manner satisfactory to the Chief of Engineers.

d. In the case of rehabilitation of non-Federal flood control works, provide a cash or in-kind contribution of 20% of the construction cost.

NOTE: Samples of assurances and related documents are located in Appendix D.

2-3. **WEATHER AND FLOOD FORECASTS.** The National Weather Service (NWS) is responsible for flood forecasting and dissemination of river stages to the general public. The Corps prepares hydrologic forecasts for use in the regulation of flood control and navigation projects. These forecasts are intended to carry out the mission of the Corps and are not for general public release, except for the areas where the NWS does not make forecasts. In these instances, Corps data and projections are coordinated with the NWS and made available to project sponsors and/or the general public.

2-4. **REQUEST FOR ASSISTANCE.** Example letters are shown in Appendix D to request assistance from the Corps for flood fight assistance and levee repair.

## CHAPTER 3

### LOCAL INTERESTS RESPONSIBILITIES

3-1. **LEVEE AND DRAINAGE DISTRICTS.** This refers to any political subdivision that operates and maintains flood control works.

3-2. **RESPONSIBILITIES.**

a. Annual Levee Inspections. The levee district personnel have a responsibility to accompany the Corps of Engineers inspectors on the annual inspection of their flood control works.

b. Maintenance of flood control works includes:

- (1) weed cutting
- (2) providing local drainage
- (3) conducting minor repairs
- (4) maintaining levee crown
- (5) maintaining ramps
- (6) repairing rain and wave washes
- (7) maintaining cattle guards
- (8) clearing debris in channels

c. Highwater maintenance includes:

- (1) maintaining slope drainage
- (2) removing cattle

- (3) blading levee crown - drain
- (4) sacking boils
- (5) preventing unauthorized travel on levees
- (6) grading access roads
- (7) removing cross fences and gates
- (8) establishing patrols - walking and riding

d. Reporting. Observe, detect and report any condition which endangers levee or flood control structures to include:

- (1) boils
- (2) caving banks
- (3) slides
- (4) soft spots or areas
- (5) seepage
- (6) animal burrows
- (7) scour
- (8) trouble spots

e. Security. Guarding and policing the levee or flood control structure against unlawful acts.





## CHAPTER 4

### CORPS OF ENGINEERS RESPONSIBILITIES

**4-1. GENERAL.** The Vicksburg District is authorized by PL 84-99 to supplement state and local flood fight efforts.

**4-2. RESPONSIBILITIES.** Listed below is a summary of Corps responsibilities:

- a. Plan for flood emergencies.
- b. Distribute flood fight manuals.
- c. Enlist and arrange cooperation with local interest and other agencies concerned with relief and rescue.
- d. Keep currently informed of flood potential.
- e. Obtain proper maintenance and encourage advance preparation by local interests.
- f. Make inspections of flood control works.
- g. Operate Corps reservoirs according to the Rule Curve to ensure optimum storage space.
- h. Keep higher authority, CONUSA (2nd & 5th Armies), and FEMA informed of flood situations.
- i. Coordinate with local interest to insure that flood control works are properly operated during floods.
- j. Protect installations and property of the Corps.
- k. Perform flood fighting and rescue work to supplement local efforts.
- l. Make post flood investigations.
- m. Perform authorized repair or restoration of projects.



**ANNEX A**

**VICKSBURG DISTRICT**

**RIVER STAGE**

**&**

**MOBILIZATION INFORMATION**

## ANNEX A

### VICKSBURG DISTRICT RIVER STAGE AND MOBILIZATION INFORMATION

GAGE	RIVER	BANK FULL		
		STAGE	PHASE I	PHASE II
ARKANSAS CITY	MISSISSIPPI	37	38	44
GREENVILLE	MISSISSIPPI	48	49	55
NATCHEZ	MISSISSIPPI	48	49	53
VICKSBURG	MISSISSIPPI	43	44	49
PINE BLUFF, AR	ARKANSAS	47	45	50
CALION	OUACHITA	79	86	**
MONROE	OUACHITA	40	45	**
JONESVILLE L&D	BLACK	50	51	**
ACME	BLACK-RED	48	48	50
GREENWOOD	YAZOO	35	35	**
SHEPPARDTOWN	YAZOO	120	120	**
SWAN LAKE	TALLAHATCHIE	26	26	**
JACKSON	PEARL	28	33	**
FULTON, AR	RED	25	25	**
SHREVEPORT	RED	30	30	**
GRAND ECORE	RED	33	33	**
ALEXANDRIA, LA	RED	34	32	**

\*\* -- Phase II is omitted from some of the smaller rivers as expansion from Phase I to Phase II is so rapid that the degree of expansion is dependent on local conditions as opposed to predetermined gage heights.

# **ANNEX B**

## **FLOOD FIGHT METHODS**

## ANNEX B

### FLOOD FIGHT METHODS

**B-1. GENERAL.** The following are described standard practices which have been successful in previous flood fights. It is not intended to restrict persons to these practices only or to set rules covering every situation. Conditions not covered by these instructions may arise, and such situations will require independent action. Normally, the procedures outlined below will be sufficient.

#### **B-2. RAISING THE LEVEE.**

a. Sack Topping. A sack topping as shown on Figure 3, page B-6, may be used to raise the levee crown about 3 feet. The base should be three times as wide as the height of the sandbag levee. The sacks should be lapped about one-third with the bottom end on top of the open end and joints of adjacent rows broken as in laying brick. Some crosswise layers should be used to tie the rows together and prevent overturning of the outside row. As each bag is placed it should be tamped into place to form a seal to prevent seepage. The open end of the sandbag should be folded back on itself in a triangle fold, not tied. Figure 22, page B-17, shows a quick fill sandbag filler.

b. Raising the Crown. When time and conditions permit, the levee can be raised by hauling borrow material and constructing in a manner as the original construction.

c. Board Fence with Earth or Sack Topping. (See Figures 1 and 2, page

B-4 & B-5.) The use of board fences in connection with any of the various types of earth topping serves several purposes. It protects against wave wash, reduces the amount of topping material required, provides for greater height, makes the topping material more impervious, and provides a more stable structure generally. If topping is required to a height over three feet, it would be more economical to construct the mudbox as shown on Figures 5 and 5-A, page B-9 & B-10.

The riverside wall should be lined with sack material, tar paper, or some similar material to prevent leaching. The fill should be placed to the top of each board and wire ties placed before placing the next board so that the wall height and wires will not interfere with filling and tamping operations.

Figure 4, page B-7 shows the method of lumber and sack topping in which the fence is built before laying the sacks. Figure 4-A, page B-8, shows a flashboard which can be quickly constructed and reinforced as necessary with earth or sack backing.

**B-3. WAVE WASH.** During a flood emergency, time, availability of materials, cost, and construction capability preclude the use of most accepted methods of permanent slope protection. Field personnel must decide the type and extent of slope protection the emergency levee will need.

(1) Methods.

a. Polyethylene and Sandbags. A combination of polyethylene (poly) and sandbags is one of the most expedient, effective, and economical methods of combating slope erosion in a flood situation. Poly and sandbags can be used in a variety of combinations, and time becomes the factor that may determine which combination to use. Ideally, poly and sandbag protection should be placed in the dry. However many cases of unexpected slope attack will occur during high water, and a method for placement in the wet is covered below. (See Figures 14 and 15, pages B-14 & B-15, for suggested methods of laying poly and sandbags.) Since each flood fight project is generally unique (river, personnel available, materials, etc.), specific details of placement and materials handling will not be covered.

(1) Anchoring. Anchoring the poly along the riverward toe is important for a successful job. It may be done in three different ways:

(a) After completion of the levee, a trench excavated along the toe, poly placed in the trench, and the trench backfilled.

(b) Poly placed flat-out from the toe and one or more rows of sandbags placed over the flap. The poly should then be unrolled up the slope and over the top enough to allow for anchoring with sandbags. Poly should be placed from downstream to upstream along the slopes and overlapped at least 2 feet.

(c) A grid system constructed of

sandbags, unless extremely high velocities, heavy debris, or a large amount of ice is anticipated. A grid system can be constructed faster and requires fewer bags and much less labor than a total covering. Various grid systems include vertical rows of lapped bags, 2" by 4" lumber held down by attached bags, and rows of bags held by a continuous rope tied to each bag. Poly has been held down by a system using two bags tied with rope and the rope saddled over the crown with a bag on each slope. Rope tied to "T" stakes made of survey stakes nailed together and driven into the ground is also a good method of securing poly and goes down very fast.

(2) Emergency Placement. In many situations during high water, poly and sandbags placed in the wet must provide the emergency protection. Wet placement may also be required to replace or maintain damaged poly or poly displaced by current action.

Figure No. 15, page B-15, shows a typical section of levee covered in the wet. Sandbag anchors are formed at the bottom edge and ends of the poly by bunching the poly around a fistful of sand or rock and tying the sandbags to the fist-sized ball. Counterweights consisting of two or more sandbags connected by a length of 1/4 inch rope are used to hold the center portion of the poly down. The number of counterweights will depend on the uniformity of the levee slope and current velocity placement of the poly consists of first casting out the poly sheet with the bottom weights and then adding counterweights to slowly sink the poly sheet into place. The poly, in most cases, will continue to move

down the slope until the bottom edge reaches the toe of the slope.

Sufficient counterweights should be added to insure that no air voids exist between the poly and the levee face and to keep the poly from flapping or being carried away in the current.

b. Movable Protection. Figure 12, page B-12, shows a movable protection. These "gates" can be made in advance. Figure 13, page B-13, shows a protection made by staking down burlap cotton bagging and weighing with filled sacks. Plastic sheeting or tarpaulin may also be used. These "gates" can be made in advance and held in reserve.

c. Horizontal Board Fence. (See Figure 17, page B-16.) This offers a method of rapid construction. As the wave action may loosen the posts in the ground, it is necessary to weight the fence with filled sacks placed on the intersections of braces and posts to prevent it from floating out.

#### B-4. SAND BOILS.

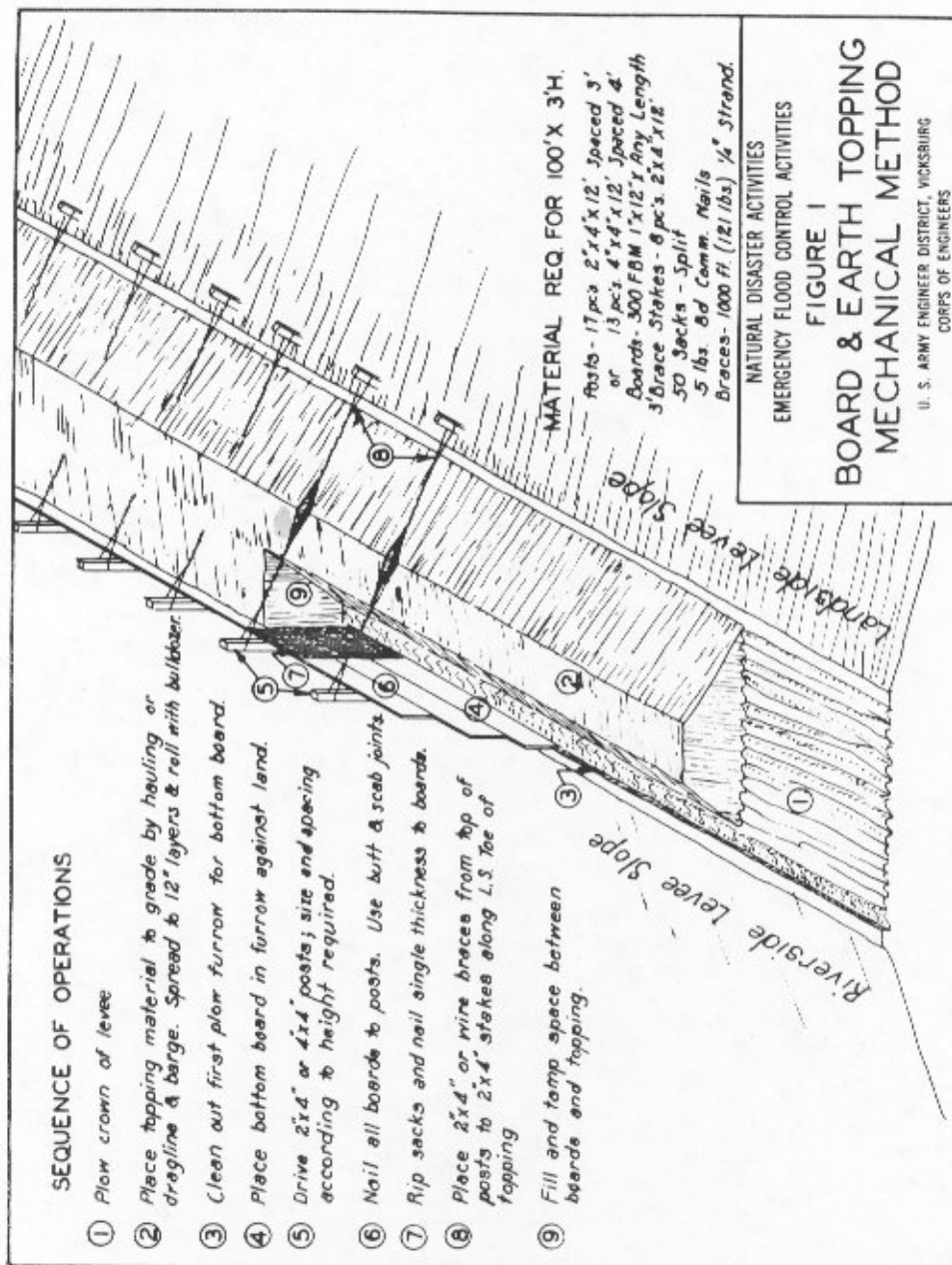
a. General. A sand boil is a condition that develops when the water pressure on the riverside of the levee causes seepage water to flow out of the ground on the land side levee slope or adjacent area. There are two types of boils: those that flow clean of soil and those that transport soil (sand). (See Figure 10, page B-11.)

(1) Discharging Soil. If discharging soil, these boils are serious, especially if within a distance of 100 feet from the toe of the levee. The common method of handling sand boils is by constructing a water-tight sandbag ring around the boil until the water within the ring has attained sufficient head (pressure) to slow the flow of water and discontinue the removal of soil. *Note: Never attempt to totally stop the flow of water.* If several boils displacing sand occur within an area, build a ring levee around the entire nest of boils, rising to such a height that none of the boils will discharge with enough force to displace sand. If sand boils show signs of discharging with increasing force, indicating that considerable sand is being displaced, prepare to raise the ring to counter the water level. Figure 10 shows methods of sacking boils.

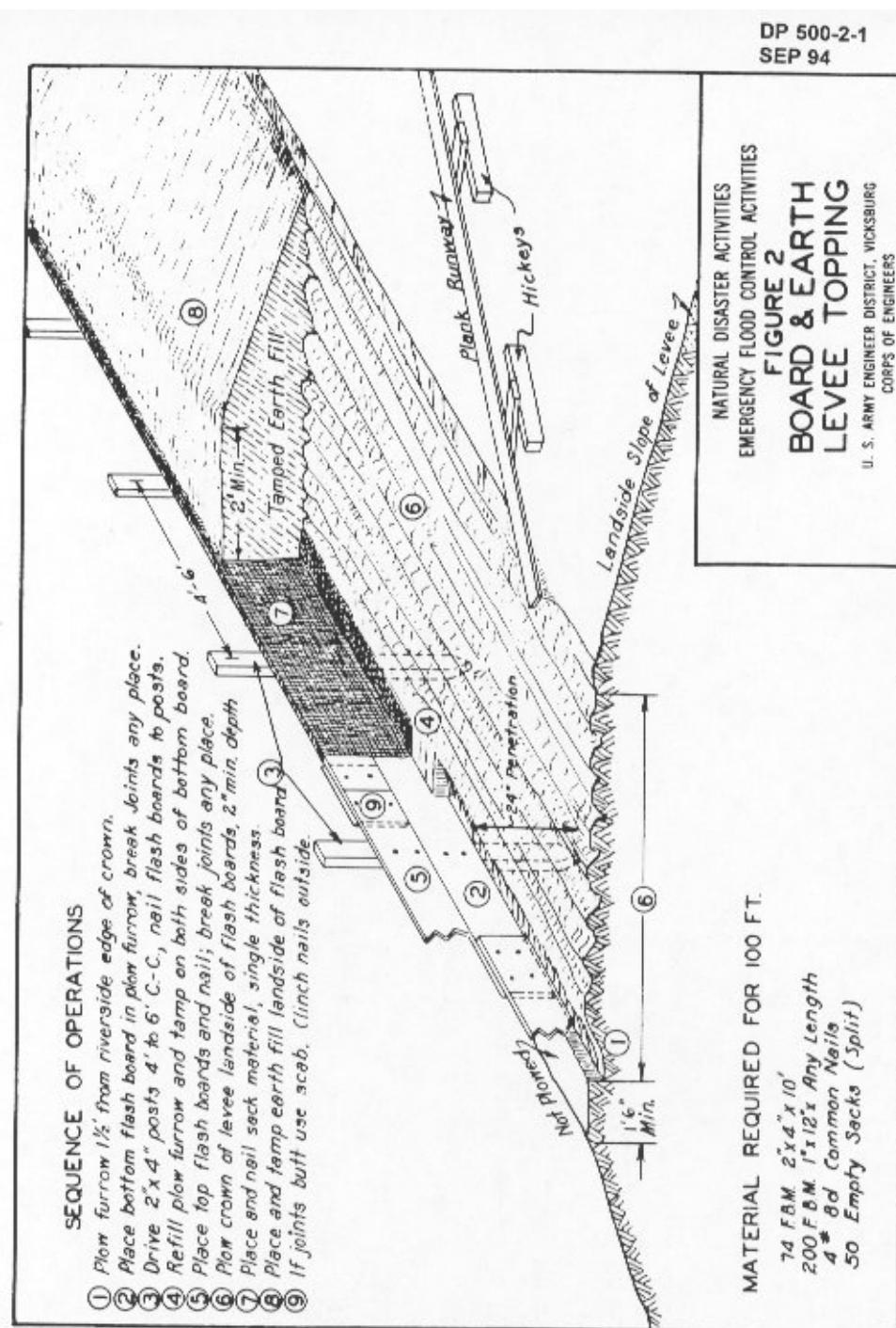
(2) Not Discharging Soil. If the boil is flowing clearly, it should be monitored frequently for any changes.



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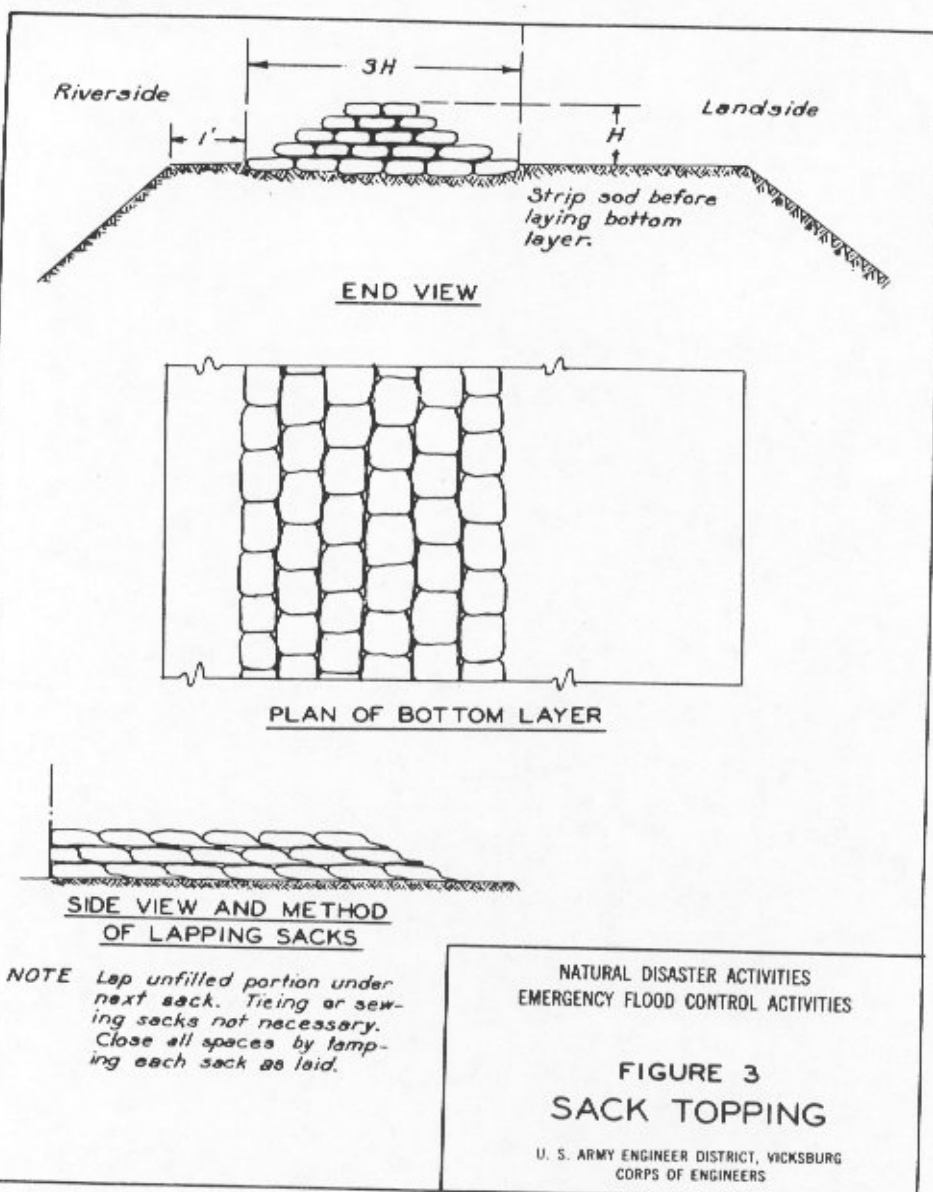






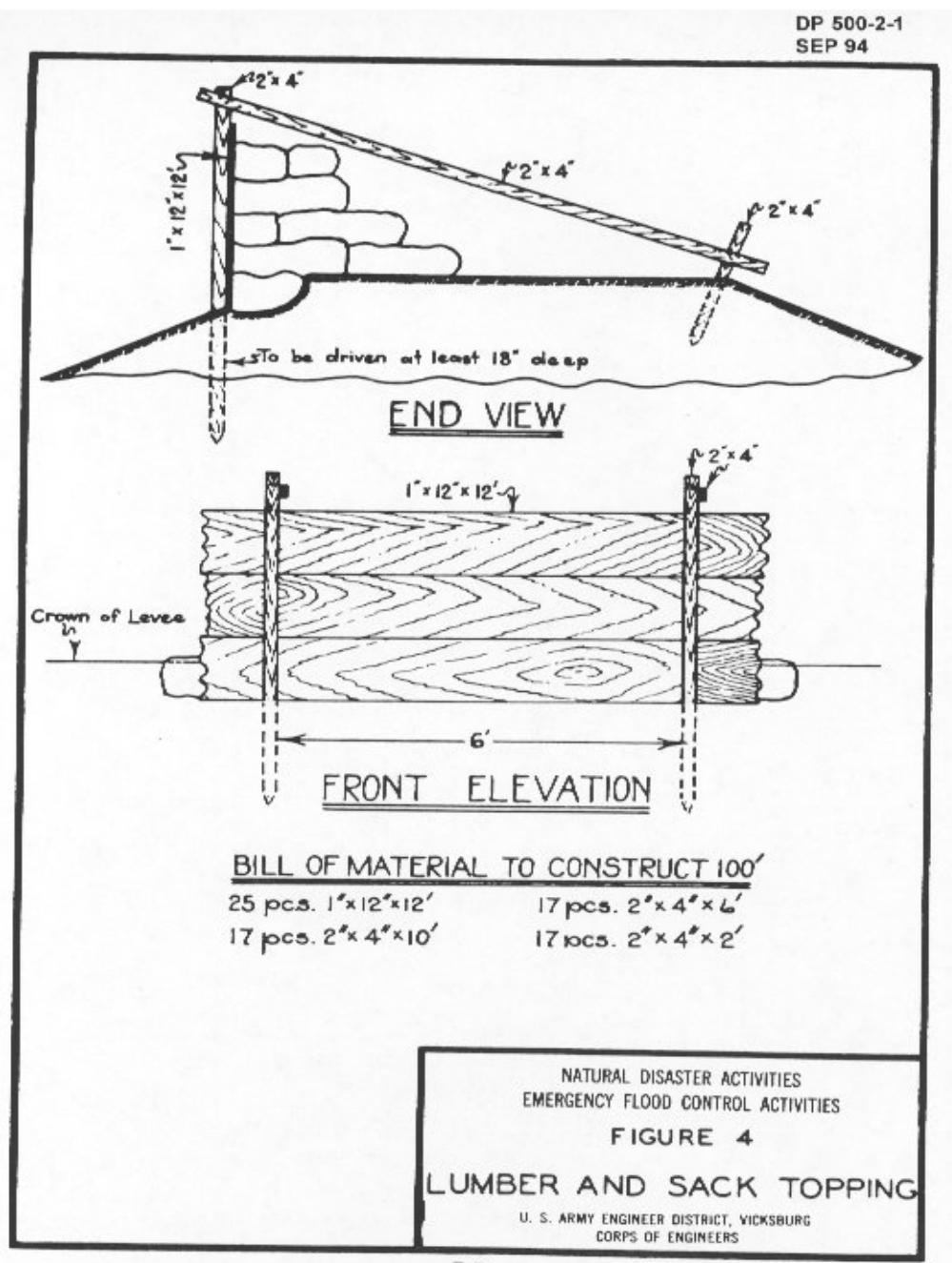


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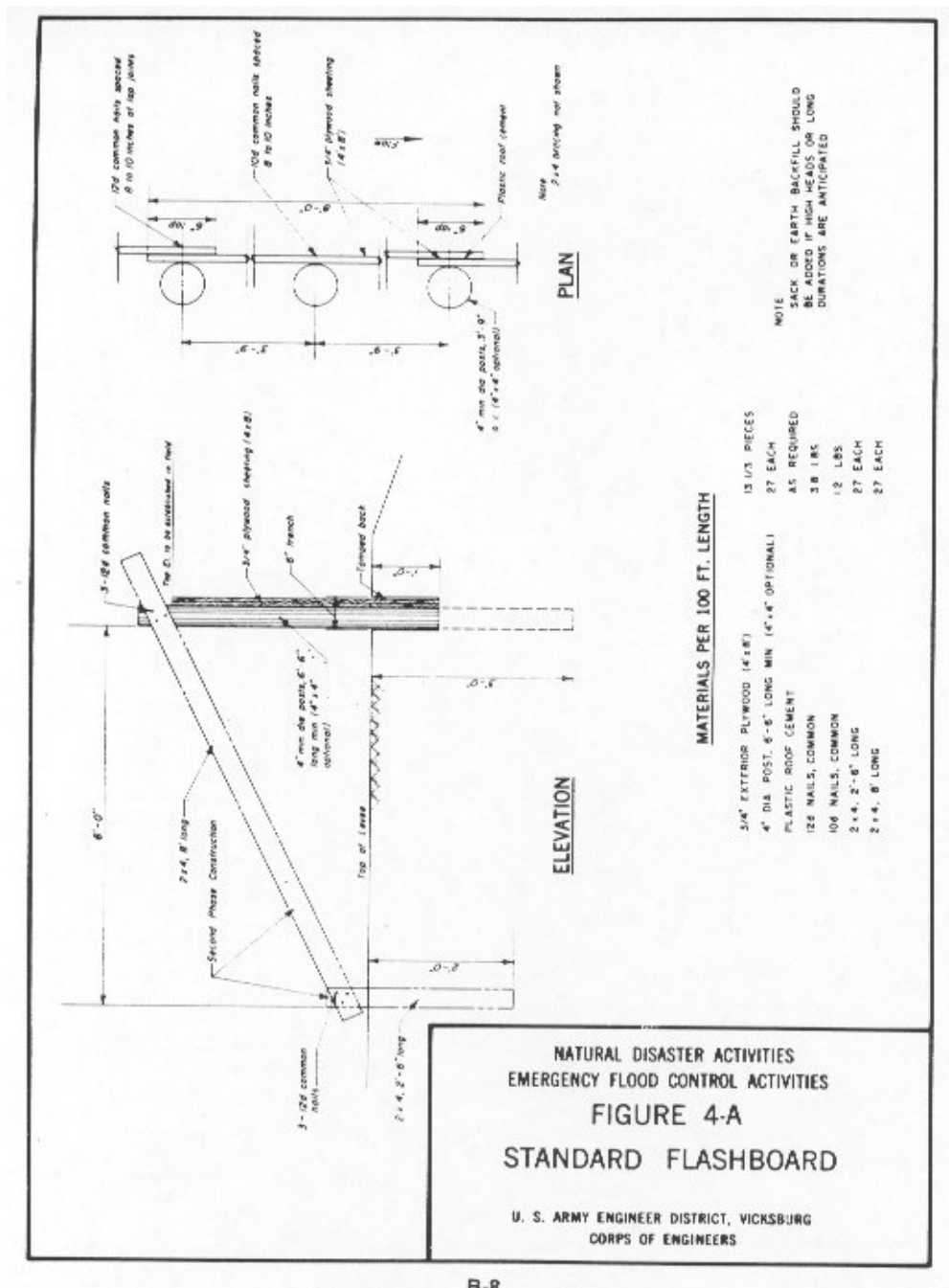




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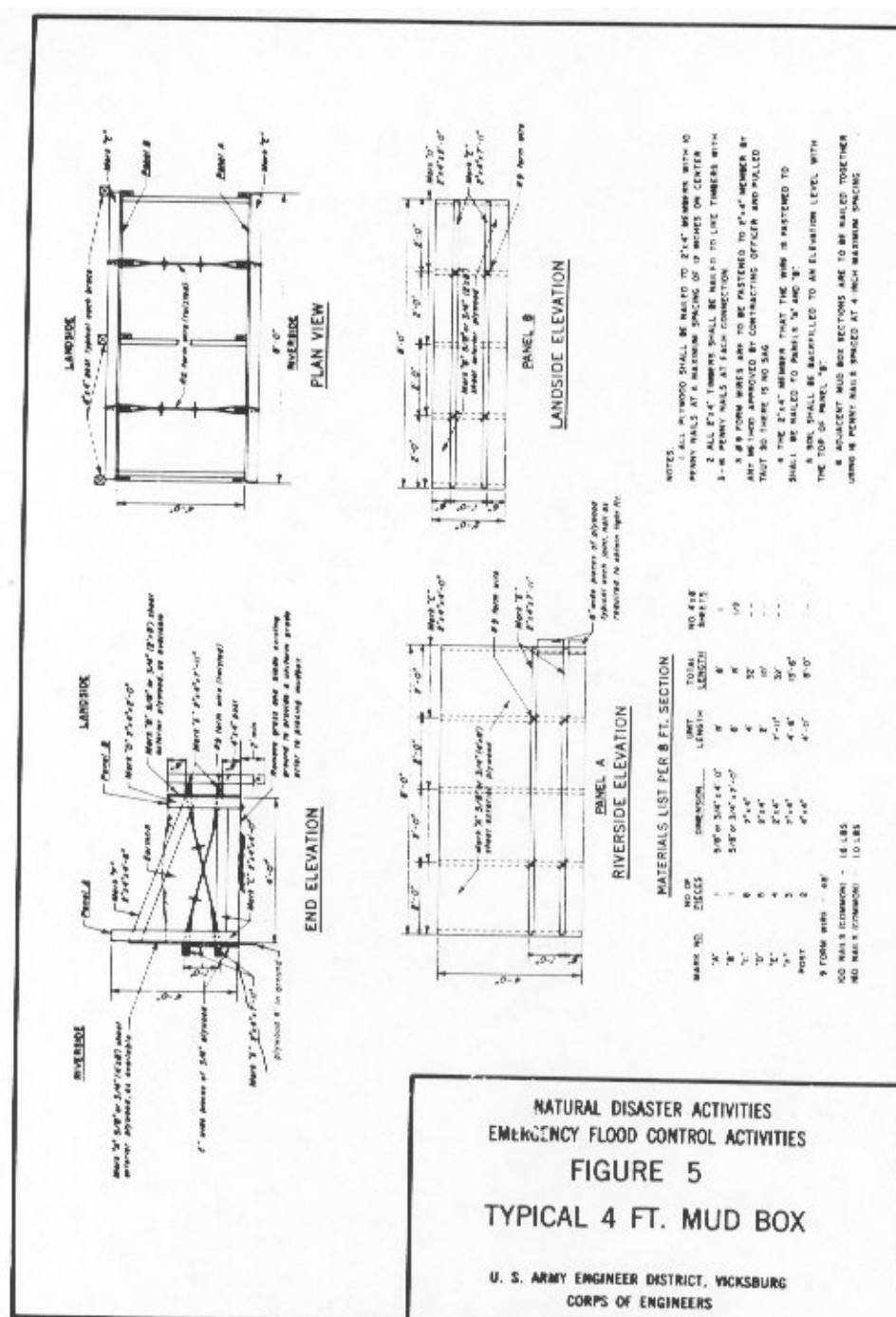






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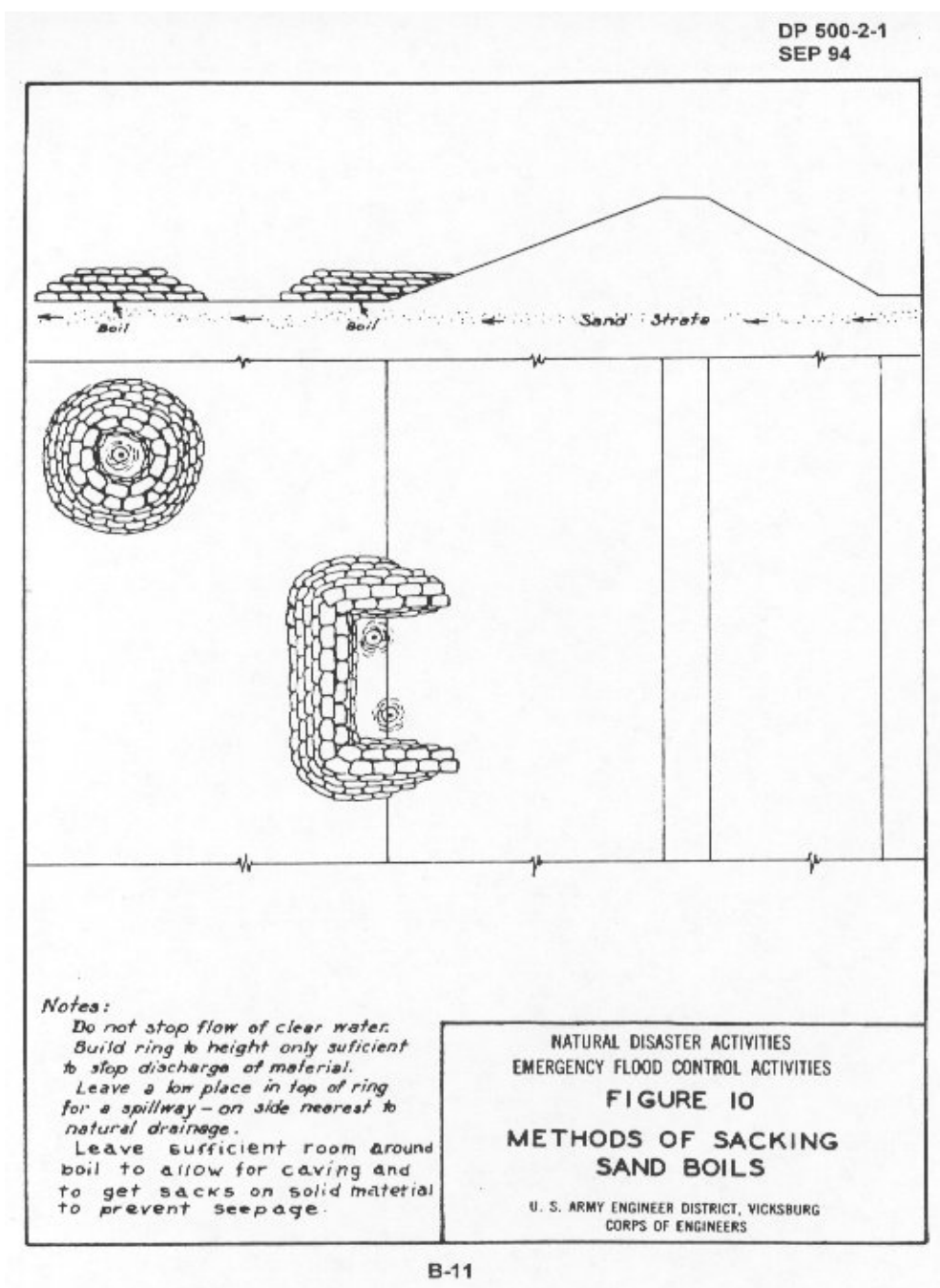








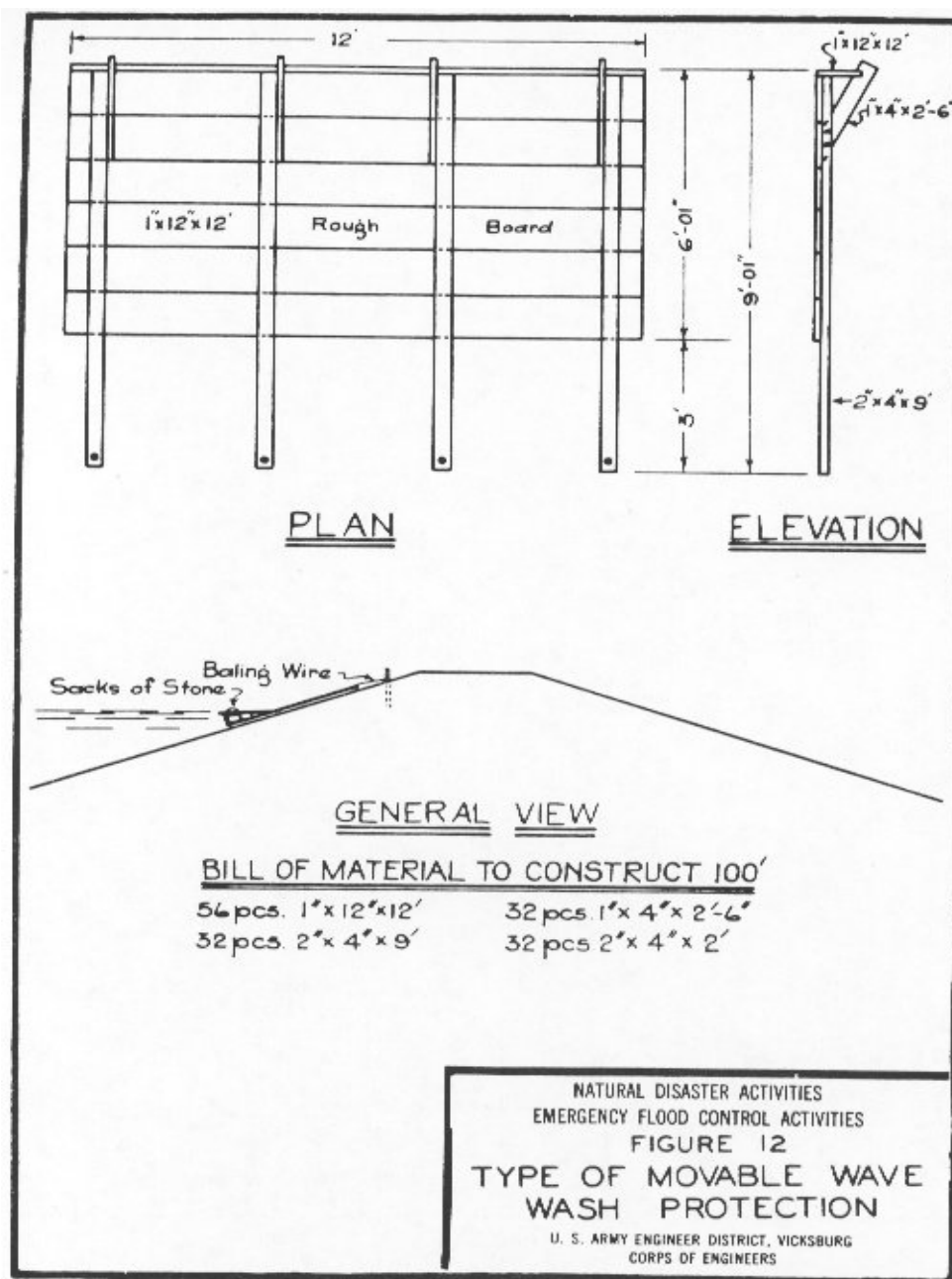




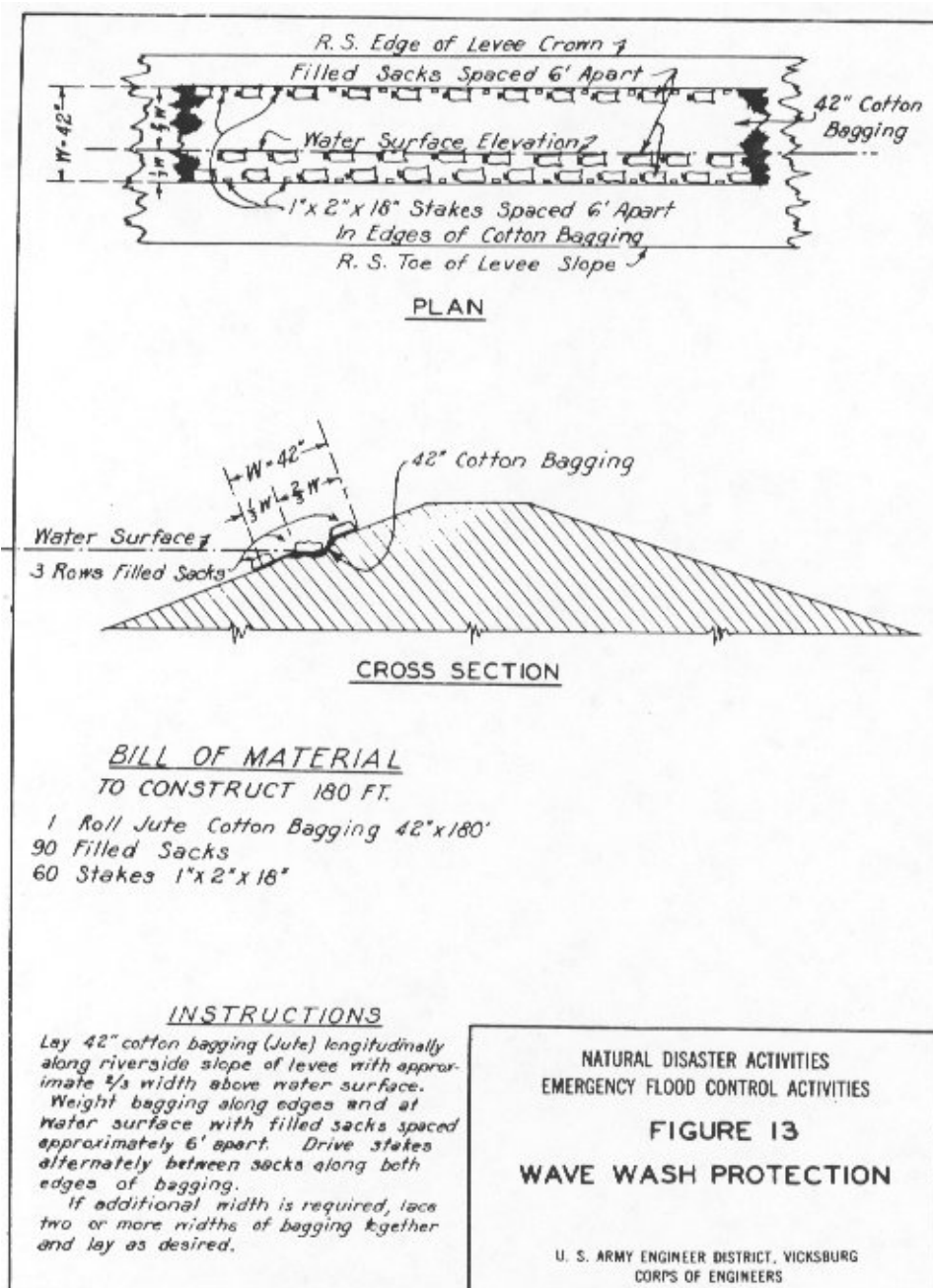
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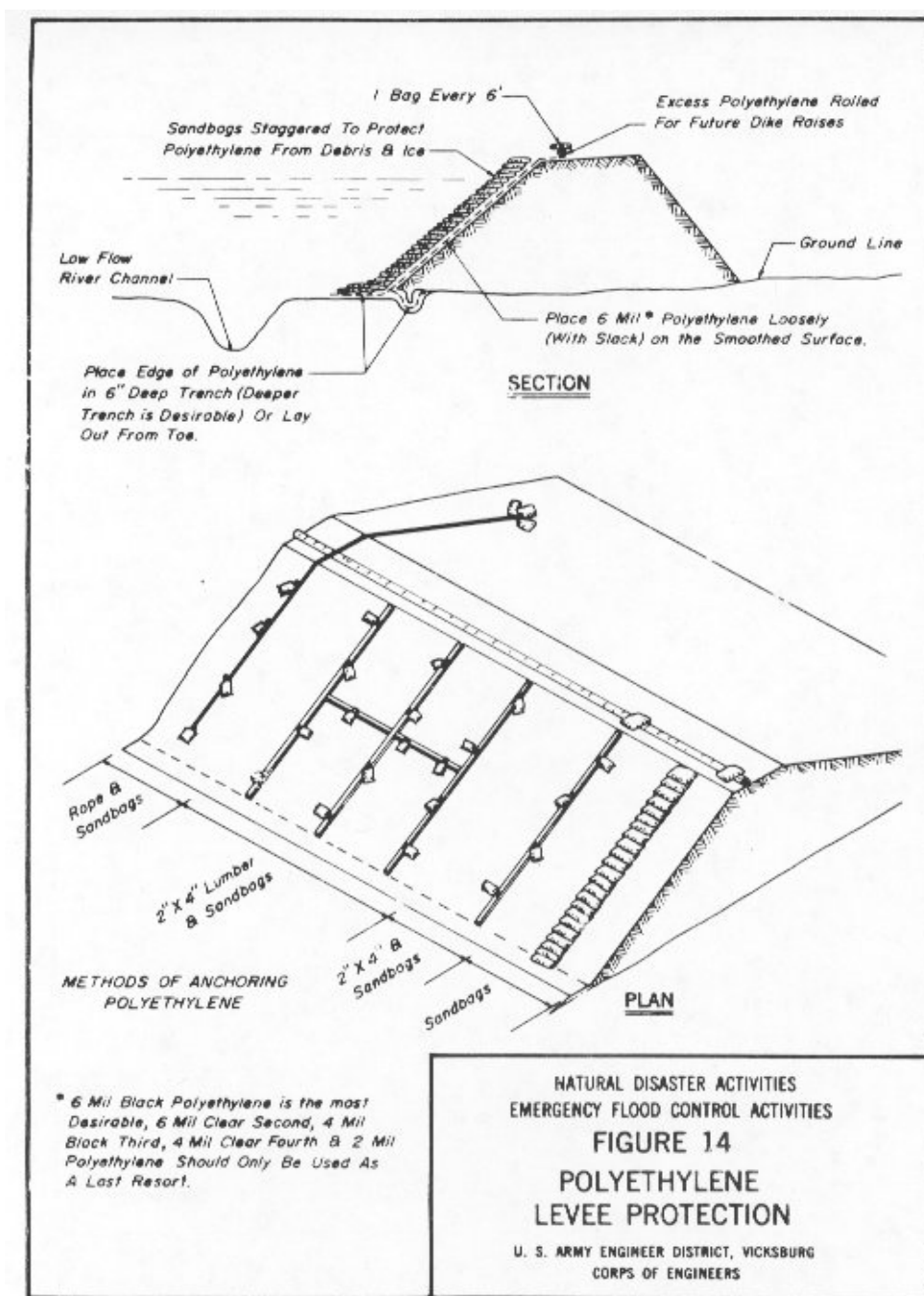






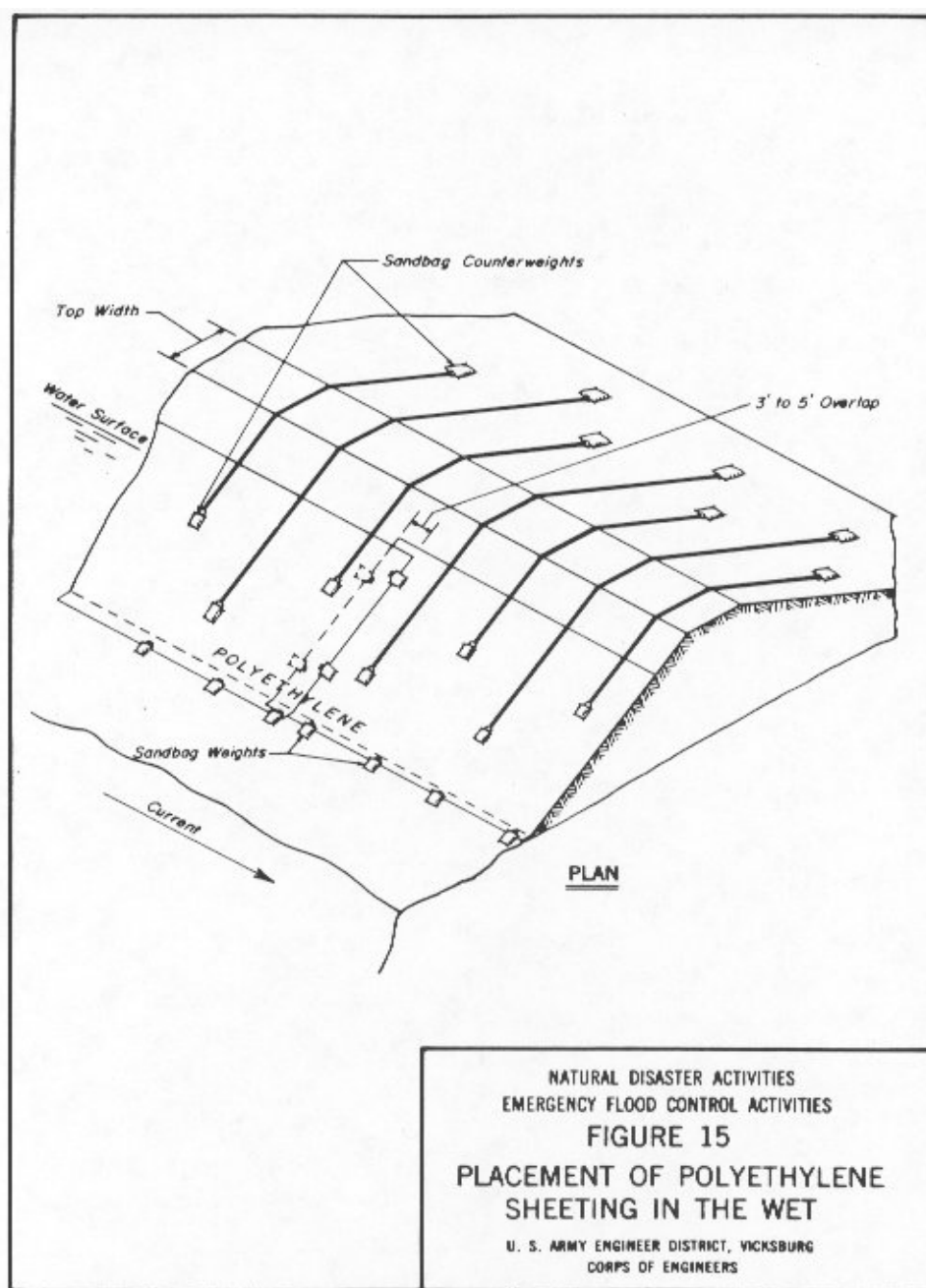
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B-14

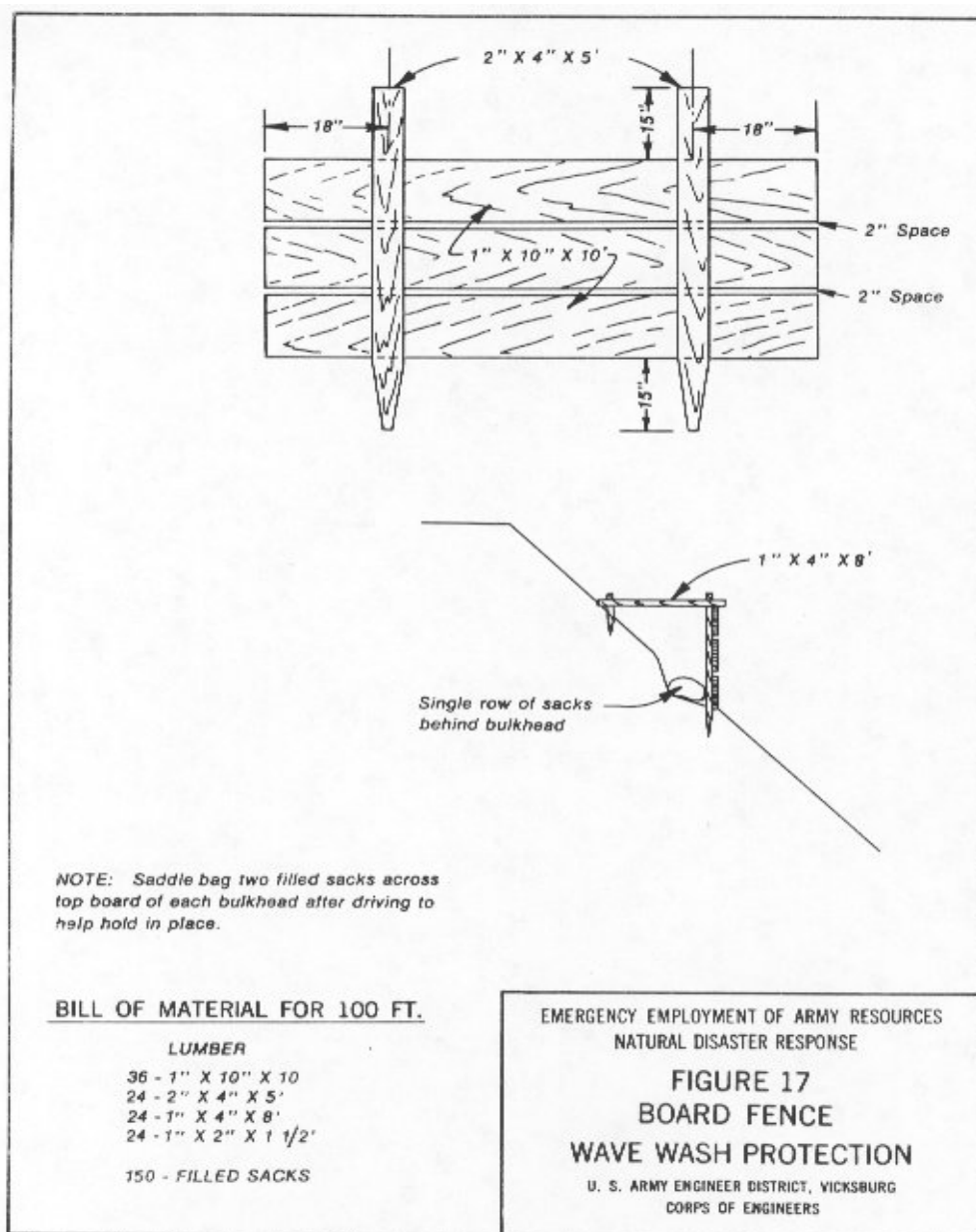




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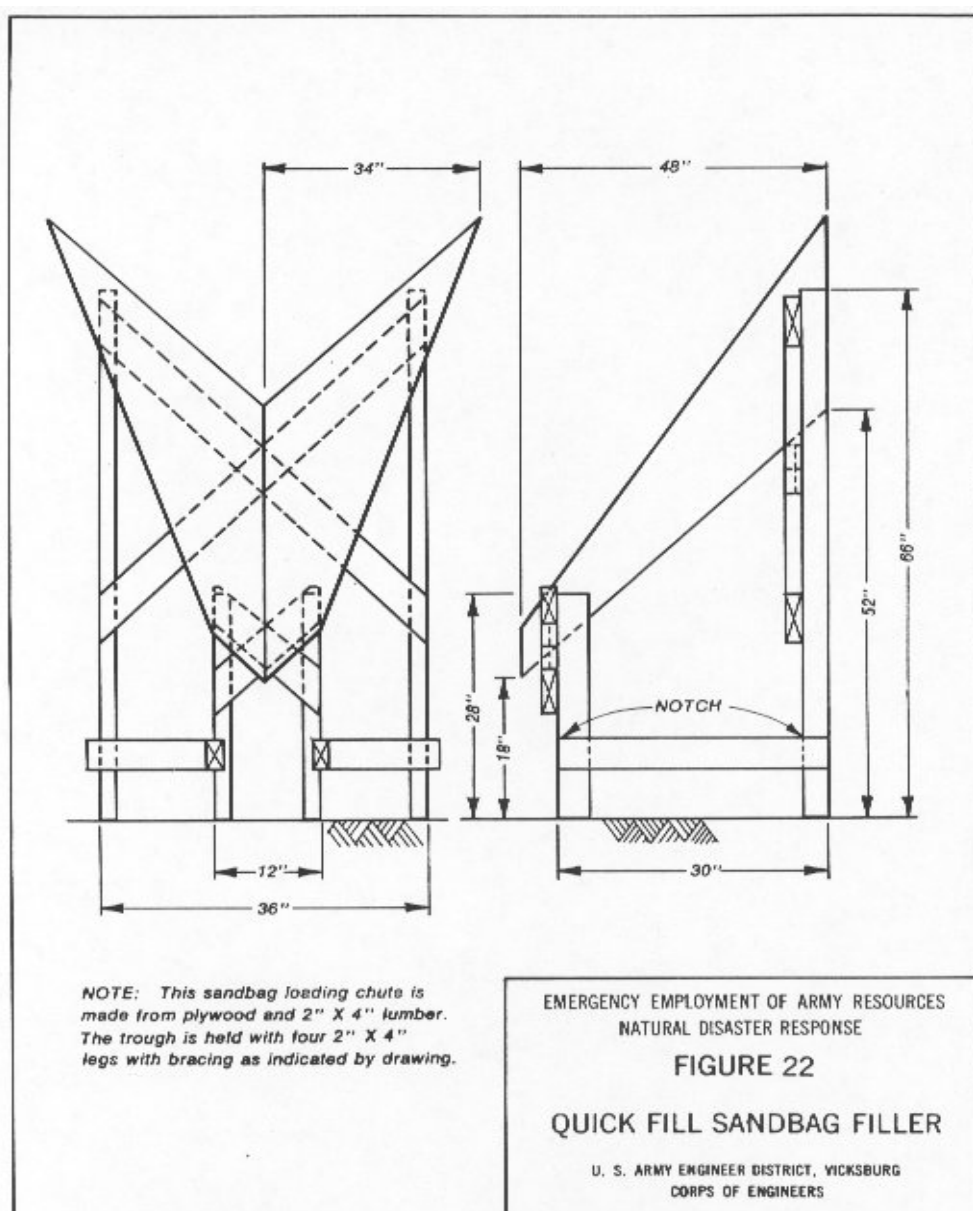






B-16





B-17



# **ANNEX C**

# **MAINTENANCE**

# **COMPLIANCE**

# **GUIDE**

## ANNEX C

### MAINTENANCE COMPLIANCE GUIDE

INSPECTION ITEM	(A) ACCEPTABLE PERFORMANCE LEVEL	(M) MINIMUM ACCEPTABLE PERFORMANCE LEVEL	(U) UNACCEPTABLE PERFORMANCE LEVEL
<b>PART A - LEVEE EMBANKMENT</b>			
1. Levee Depressions	Minimal depressions or potholes; proper drainage.	Some depressions that will not pond water.	Depressions 6' vertical or greater with water ponded.
2. Levee surface Erosion with Inspections Access	No erosion of levee crown or slopes.	Erosion of levee crown or slopes that will not interrupt inspection or maintenance access.	Erosion of levee crown or slopes that has interrupted inspection or maintenance access.
3. Slope Stability	No slides present, or erosion of slopes more than 4" deep.	Minor surfacial sliding that with deferred repair does not pose an immediate threat to levee integrity. No displacement or bulges.	Evidence of deep seated sliding (2' vertical or greater) requiring repairs to reestablish levee integrity
4. Cracking	No cracks in transverse or longitudinal direction observed in the levee.	Longitudinal cracks are no longer than the levee height. No displacement and bulging. No transverse cracks observed.	Longitudinal cracks are greater than levee height with some bulging observed. Transverse cracks are evident.
5. Animal Burrows	Continuous animal burrow control program that eliminates any active burrowing in a short period of time.	Animal burrows present that will not result in seepage or slope stability problems.	Animal burrows present that would result in possible seepage or slope stability problems.
6. Unwanted Levee Growth	No large brush or trees exist in the levee section. Grass cover well maintained.	Minimal tree (2' diameter or smaller) and brush cover present that will not threaten levee integrity (NOTE: Trees that have been cut and removed from the levee should have their roots excavated and the cavity filled and compacted with impervious material.	Tree, weed and brush cover exists in the levee requiring removal to reestablish or ascertain levee integrity. (NOTE: If significant growth on the levee exists, prohibiting rating of other levee inspection items, then the inspection should be ended until this item is corrected.)

INSPECTION ITEM	(A) ACCEPTABLE PERFORMANCE LEVEL	(M) MINIMUM ACCEPTABLE PERFORMANCE LEVEL	(U) UNACCEPTABLE PERFORMANCE LEVEL
7. Encroachments	No trash, debris, excavations, structures, or other obstructions present.	Trash, debris, excavations, structures, or other obstructions present or inappropriate activities occurring that will not inhibit levee operations and maintenance performance.	Trash, debris, excavations, structures, or other obstructions present or inappropriate activities that would inhibit levee operations and maintenance performance.

**PART B - CHANNEL/FLOODWAY**

1. Riprap/Revetment Protection. Riverward Levee Slope & Toe, and Channel Bank	Existing erosion protection works which is properly maintained and undamaged.	No scouring activity that could undercut banks or erode levee or could restrict desired channel flows.	Meandering and/or scour activity that is undercutting banks or eroding levees or impairs channel flows by causing turbulence, meandering or shoaling.
2. Channel/Floodway Capacity	Full channel capacity insured through next projected flood event by performed advance removal of debris, sand/silt deposits or other obstruction including unwanted vegetation beyond design flowline dimensions.	Channel capacity minimally affected by debris, sand/silt deposits, vegetation or other obstructions; no removal of debris has been accomplished to insure full capacity through the next flood event.	Channel obstructions have reduced the floodway capacity and hydraulic effectiveness, with no proposed maintenance planned.

**PART C - STRUCTURES**

1. Movement of Concrete, Floodwalls, Headwalls & Aprons	Tilting sliding or settling of structures, that does not threaten the integrity or performance	Uncorrected sliding or settlement of structures of a magnitude that doesn't affect performance.	Un-correcting tilting or settlement of structures that has resulted with a threat to the structure's integrity and performance.
2. Concrete Surface	Negligible spalling or scaling. No cracks present that are not controlled by reinforcing steel or that cause integrity deterioration or result in inadequate structure performance.	Unrepaired spalling, scaling and cracking present but immediate integrity or performance of structure not threatened.	Unrepaired surface deterioration or deep, controlled cracks present that results in an unreliable structure.
3. Structural Foundations	No scouring or undermining near the structures	Scouring near the footing of the structure but not close enough to impact structure stability during the next flood event.	Unrepaired scouring or undermining at the foundation which has impacted structure integrity.

INSPECTION ITEM	(A) ACCEPTABLE PERFORMANCE LEVEL	(M) MINIMUM ACCEPTABLE PERFORMANCE LEVEL	(U) UNACCEPTABLE PERFORMANCE LEVEL
4. Culverts	<p>a) No breaks, holes, cracks in the culvert that would result in any significant water leakage. No surface distress that could result in permanent damage.</p> <p>b) Negligible debris or silt blocking culvert section. No or minimal debris or sediment present which have negligible effect on operations of the culvert.</p>	<p>Culvert integrity not threatened by spalls, scales (concrete) or surface rusting. Cracks are present but resulting leakage is not impacting the structure.</p> <p>Debris or sediment present, which is proposed to be removed prior to the next flood event, that minimally effects the operations of the culvert.</p>	<p>Culvert has deterioration such as surface distress and/or has significant leakage in quantity or degree to threaten integrity.</p> <p>Accumulated debris or settlement which has not been annually removed and severely affects the operations of the culvert.</p>
5. Gates	Gates open easily and close to a tight seal. Materials do not have permanent corrosion damage and appear to have historically been maintained adequately.	Gates operate but leak when closed, however, leakage quantity is not a threat to performance. All appurtenances of the facility are in satisfactory condition.	Gates leak significantly when closed or don't operate. Gates and appurtenances have damages which threaten integrity and/or appear not to have been maintained adequately.
6. Closure Structures	Closure Structure in good repair. Placing equipment readily available at all times.	N/A	Closure structure in poor condition. Parts missing. Placing equipment may not be available within normal warning time.
<b>PART D - PUMPING PLANTS</b>			
1. Pumps and Motors	All Pumps and motors are operational. Preventive maintenance is occurring and system is periodically subject to performance testing.	All pumps are operational and minor discrepancies are such that pumps could be expected to perform through the next projected period of usage.	Pumps are not operational or noted discrepancies have not been corrected.
2. Power	Adequate, reliable and enough quantity to meet demands based on historically highest projected consumption.	Adequate, reliable source to meet average historical high demands of next projected period of consumption.	Power source insufficient historically unreliable to sustain operations during next projected period of consumption.



INSPECTION ITEM	(A) ACCEPTABLE PERFORMANCE LEVEL	(M) MINIMUM ACCEPTABLE PERFORMANCE LEVEL	(U) UNACCEPTABLE PERFORMANCE LEVEL
3. Pump Control System	Operational and maintained free of damage, corrosion or other debris.	Operational with minor discrepancies.	Not operational or uncorrected noted discrepancies.
4. Pip Embedded metal, Trash Racks and Gates	All metal parts protected from permanent damage from corrosion. trash racks free from damage and debris and are capable of being cleared, if required, during operation. gates operable.	Corrosion on metal parts appears maintainable. Trash racks free from damage and minimum debris present and are capable of being cleared before next flood event or during operation. gates operable.	Metal parts need replacement. Trash racks damaged, have accumulated debris that have not been cleared annually or cannot be cleared during operation.
5. Sump	Clear of debris and obstructions and mechanisms are in place to maintain this condition during operation.	Clear of large debris and minor obstructions present and mechanisms are in place to deter further accumulation during operation.	Large debris or major obstructions present in sump or no mechanism exists to prevent debris accumulation during operation.

Condition	Recommendation
A - Acceptable	No immediate work required
M - Minimally Acceptable	A deficient condition exists which needs to be improved by the levee owner. the inspector's evaluation should address the impacts on the original operating deficiencies resulting from the condition identified.
U - Unacceptable	Items which fall within this category may render the levee ineligible for rehabilitation under PL 84-99 unless immediate corrective action is taken by owner/sponsor. the inspector's evaluation should establish specific time periods within which the unacceptable performance items must be upgraded to at least Condition "M". The Emergency Management Branch should notify the potential impacts of this condition.
"M" - The Emergency Management Branch should notify the potential impacts of this condition.	



# **ANNEX D**

## **SAMPLE LETTERS**



**EXAMPLE 1**  
**SAMPLE LETTER**  
**FOR**  
**CORPS OF ENGINEERS FLOOD FIGHT ASSISTANCE**

District Engineer  
USAED, Vicksburg  
2101 North Frontage Road  
Vicksburg, MS 39180-5191

Dear Colonel \_\_\_\_\_:

This letter confirms our verbal request for Corps of Engineers flood fight assistance under Public Law 84-99 on the (river, basin, city, county/parish etc.) (Be as specific as possible.)

We agree to (1) provide, without cost to the United States, all lands easements and rights-of-way, including borrow and disposal sites, necessary for the emergency operations and (2) hold and save the United States free from damages due to the authorized work, exclusive of damages due to the fault or negligence of the United States or its contractors.

Sincerely,

(name/title)  
(levee district)



**EXAMPLE 2**  
**SAMPLE LETTER**  
**FOR**  
**CORPS OF ENGINEERS TO ASSUME LEADERSHIP AND**  
**DIRECTION OF FLOOD FIGHT OPERATIONS**

District Engineer  
USAED, Vicksburg  
2101 North Frontage Road  
Vicksburg, MS 39180-5191

Dear Colonel \_\_\_\_\_:

This letter confirms our verbal request for Corps of Engineers flood fight assistance under Public Law 84-99 on the (river, basin, city, county/parish etc.) (Be as specific as possible.)

We request that the Corps of Engineers assume leadership of the flood emergency and direct the flood fight operations during this emergency. This request is made with the understanding that leadership is limited to operational control of emergency forces and is subordinate to responsibilities and authorities of the state and local subdivisions.

If the Vicksburg District assumes leadership of the flood fight operations, we agree to (1) provide, without cost to the United States, all lands easements and rights-of-way, including borrow and disposal sites, necessary for the emergency operations and (2) hold and save the United States free from damages due to the authorized work, exclusive of damages due to the fault or negligence of the United States or its contractors.

Sincerely,

(name/title)  
(levee district)





**EXAMPLE 3**  
**SAMPLE LETTER**  
**FOR**  
**POST FLOOD ASSISTANCE**

District Engineer  
USAED, Vicksburg  
2101 North Frontage Road  
Vicksburg, MS 39180-5191

Dear Colonel \_\_\_\_\_:

On (date) the state suffered damages at (city,county/parish etc.) which were caused by flooding along the (river). Without immediate assistance, imminent threat to life and property loss will continue.

The State has committed all of its resources to supplement the efforts by the local government but assistance is still needed. Therefore, I request Corps of Engineers assistance under the post-flood response program. I understand that the Corps of Engineers may provide assistance for 10 days beginning the day you receive this letter, unless FEMA acted to either approve or deny a disaster declaration. The specific areas that require assistance and the assistance requested are:

<u>AREA</u>	<u>TYPE OF ASSISTANCE</u>
-------------	---------------------------

By my letter to FEMA, I have also requested FEMA to begin preliminary damage assessments to consider a disaster declaration. A copy is enclosed for your information.

Please contact the Director of the Office of Emergency Preparedness/ Emergency Management Agency if you have any questions concerning this request.

Sincerely,

(signed by Governor)



**EXAMPLE 4**  
**SAMPLE LETTER**  
**OF**  
**LEVEE REPAIR ASSISTANCE**

District Engineer  
USAED, Vicksburg  
2101 North Frontage Road  
Vicksburg, MS 39180-5191

Dear Colonel \_\_\_\_\_:

The (name of public sponsor, levee district, etc.) of (county), (state), hereby requests assistance from the Vicksburg District, Corps of Engineers, to repair our flood-damaged levee under Public Law 84-99.

The flood of (date) on the (river or stream) damaged our levee at the locations marked on the enclosed map. The damages are described as follows:

The repairs to the levee are beyond our normal maintenance capability and are necessary in order to protect lands within.

If repairs are approved, we will provide an appropriate resolution documenting our agreement to provide necessary assurances as public sponsor for this project.

Sincerely,

(name)  
(title)



Example 5

SAMPLE OF  
RESOLUTION OF ASSURANCES

The following resolution was introduced by \_\_\_\_\_, seconded by \_\_\_\_\_, and adapted as follows, to-wit:

WHEREAS, pursuant to Public Law 99, 84th Congress, approved 28 June 1955, and acts supplementary thereto and amendatory thereof, the Chief of Engineers, Department of the Army, contemplates emergency flood control levee repair work and levee setback on the \_\_\_\_\_ Levees of the \_\_\_\_\_ River in the vicinity of Levee Station \_\_\_\_ + \_\_ in \_\_\_\_\_, (County/Parish), (Arkansas/Mississippi/Louisiana); and,

WHEREAS, prior to the commencement of the repair, local interests are required to furnish assurances to the United States of America that they will:

a. Provide without cost to the United States of America all lands, easements, and rights-of-way necessary, including the right of ingress and egress, for the construction of the emergency works free and clear of all improvements, utility lines, and other obstructions; and,

b. Hold and save the United States of America free from any damage due to the construction of the works, exclusive of damages due to the fault or negligence of the United States of America or its contractors; and,

c. Maintain and operate all the works after completion, including all interrelated portions of the levee relating to the work hereinabove mentioned and under the control of the \_\_\_\_\_ Levee District, in a manner satisfactory to the Chief of Engineers, Department of the Army; and,

d. Comply with the applicable provisions of the "Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646, as amended by Public Law 100-17); and,

WHEREAS, the construction of said works will provide protection for the lands in the area and will be of great benefit, value, and internal improvement to \_\_\_\_\_ (County/Parish), the \_\_\_\_\_ Levee District, and to the State of (Arkansas/Mississippi/Louisiana); and,

WHEREAS, \_\_\_\_\_ Levee District is a responsible local agency authorized by law to grant the necessary assurances and to perform the requirements of local cooperation.

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**NOW, THEREFORE, BE IT RESOLVED** that the Board of Commissioners of \_\_\_\_\_ Levee District does hereby give assurances to the United States of America that it will:

- a. Provide without cost to the United States of America all lands, easements, and rights-of-way necessary, including the right of ingress and egress, for the construction of the emergency works free and clear of all improvements, utility lines, and other obstructions; and,**
- b. Hold and save the United States of America free from any damages due to the construction of the works, exclusive of damages due to the fault or negligence of the United States of America or its contractors; and,**
- c. Maintain and operate all the works after completion, including all interrelated portions of the levee relating to the work hereinabove mentioned and under the control of the \_\_\_\_\_ Levee District, in a manner satisfactory to the Chief of Engineers, Department of the Army; and,**
- d. Comply with the applicable provisions of the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646, as amended by Public Law 100-17).**

**BE IT FURTHER RESOLVED** that \_\_\_\_\_, President of this Board, be and he is hereby authorized, empowered, and directed to sign and deliver, for and on behalf of this Board and Levee District, an Agreement of Assurances to the United States of America embodying the facts and covering the items of assurances enumerated herein, and to take any and all proper steps and to do any and all acts that may be necessary or proper in the premises, and he is hereby authorized, empowered, and directed to sign and affix the Seal of this Board to such agreement provided for hereunder, and to any instrument and document in connection therewith which may be necessary or convenient in the premises.

**BE IT FURTHER RESOLVED** that the President of this Board be and he is further authorized, empowered, and directed to acquire, for and in the name of the said Board, all required lands, easements, and rights-of-way, to execute all instruments, and to do and perform all other acts legally required to make them available, and to grant permission of entry thereon to the United States of America for the purpose of carrying out the works.

**BE IT FURTHER RESOLVED** that a certified copy of this resolution be furnished to the District Engineer, USACE, Vicksburg District, Vicksburg, Mississippi.

ADOPTED this \_\_\_\_\_ day of \_\_\_\_\_, 199\_\_\_\_.

ATTEST:

\_\_\_\_\_, Secretary  
Board of Commissioners  
\_\_\_\_\_ Levee District

\_\_\_\_\_, President  
Board of Commissioners  
\_\_\_\_\_ Levee District

The above and foregoing Resolution was adopted by the following "aye" and  
"nay" votes:

AYES:

NAYS:

ABSENT:

**CERTIFICATE**

I, \_\_\_\_\_, Secretary of the Board of Commissioners of the \_\_\_\_\_ Levee District, hereby certify that the foregoing is a true and correct copy of a Resolution adopted by the Board of Commissioners of the \_\_\_\_\_ Levee District, at its \_\_\_\_\_ meeting held in \_\_\_\_\_, (Arkansas/Mississippi/Louisiana), on the \_\_\_\_ day of \_\_\_\_\_, 199\_\_\_\_.

IN FAITH WHEREOF, witness my signature and impress of the Official Seal of this Board hereunto affixed at \_\_\_\_\_, (County/Parish) of \_\_\_\_\_, (Arkansas/Mississippi/Louisiana), on this the \_\_\_\_ day of \_\_\_\_\_, 199\_\_\_\_.

\_\_\_\_\_, Secretary  
Board of Commissioners  
\_\_\_\_\_ Levee District



Example 6

SAMPLE OF  
AGREEMENT BETWEEN  
THE UNITED STATES OF AMERICA  
AND THE \_\_\_\_\_ LEVEE DISTRICT  
FOR LOCAL COOPERATION ON \_\_\_\_\_ RIVER LEVEES  
IN THE VICINITY OF LEVEE STATION \_\_\_\_\_ +  
IN \_\_\_\_\_ (COUNTY/PARISH), (ARKANSAS/MISSISSIPPI/LOUISIANA)

THIS AGREEMENT entered into this the \_\_\_\_\_ day of \_\_\_\_\_, 199 \_\_, by and between the UNITED STATES OF AMERICA, hereinafter called the "Government," represented by the Contracting Officer executing this Agreement, and the BOARD OF LEVEE COMMISSIONERS, \_\_\_\_\_ LEVEE DISTRICT, a body politic and corporate of the State of (Arkansas/Mississippi/ Louisiana), with its principal office in the City of \_\_\_\_\_, (Arkansas/Mississippi/Louisiana), hereinafter called the "Sponsor".

WITNESSETH THAT:

WHEREAS, pursuant to Public Law 99, 84th Congress, approved 28 June 1955, and acts supplementary thereto and amendatory thereof, the Chief of Engineers, Department of the Army, contemplates an emergency flood control levee repair work around the City of \_\_\_\_\_ and parts of \_\_\_\_\_ (County/Parish), (Arkansas/Mississippi/Louisiana), as follows, hereinafter called the "Project", to-wit;

Emergency levee replacement, setback, shaping, and dressing on the following described land:

(SEE EXHIBIT "A" ATTACHED HERETO)

WHEREAS, the Sponsor hereby represents that it has the authority and capability to furnish the non-Federal cooperation hereinafter set forth.

NOW, THEREFORE, the parties agree as follows:

The Sponsor agrees that, if the Government shall commence construction of the Project substantially in accordance with the hereinabove Federal legislation authorizing such Project, the Sponsor shall, on consideration of the Government's commencing construction of such Project, fulfill the requirements of non-Federal cooperation, to-wit:

a. Provide without cost to the United States of America all lands, easements, and rights-of-way necessary, including the right of ingress and egress, for the construction of the works free and clear of all improvements, utility lines, and other obstructions;

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b. Hold and save the United States of America free from any damage due to the construction of the works, exclusive of damages due to the fault or negligence of the United States or its contractors; and

c. Maintain and operate all the works after completion, including all interrelated portions of the levee relating to the work hereinabove mentioned and under the control of the Sponsor, in a manner satisfactory to the Chief of Engineers, Department of the Army; and

d. Comply with the applicable provisions of the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646, 84 Stat. 1894) as amended by Public Law 100-17.

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the day and year first above written.

ATTEST:

BOARD OF COMMISSIONERS  
\_\_\_\_\_  
LEVEE DISTRICT

\_\_\_\_\_  
, Clerk

, President

WITNESS:

UNITED STATES OF AMERICA

\_\_\_\_\_

, Contracting Officer

DATE:

Example 7

SAMPLE OF  
ATTORNEY'S OPINION

STATE OF (Arkansas/Mississippi/Louisiana)

COUNTY/PARISH OF

I, \_\_\_\_\_, a duly qualified and licensed Attorney at Law in and for the State of (Arkansas/ Mississippi/Louisiana), and Attorney for the Board of Levee Commissioners of the \_\_\_\_\_ Levee District, do hereby certify that in my opinion, after reading the Agreement between the United States of America and the Board of Commissioners of \_\_\_\_\_ Levee District for Local Cooperation on \_\_\_\_\_ Levee in the vicinity of Levee Station \_\_\_\_ + \_\_\_\_, \_\_\_\_\_, \_\_\_\_ (County/Parish), (Arkansas/Mississippi/Louisiana), executed by \_\_\_\_\_, President of the Board of Commissioners of the \_\_\_\_\_ Levee District, on the day of \_\_\_\_\_, 199\_\_\_\_, and the Resolution of Assurances adopted by said Board on the \_\_\_\_ day of \_\_\_\_\_, 199\_\_\_\_, and carefully examining the same, that:

1. The Resolution of Assurances was duly and legally adopted, and the Agreement for Local Cooperation was duly and legally executed by \_\_\_\_\_, President of the Board of Commissioners of the \_\_\_\_\_ Levee District, pursuant to said Resolution; and the Agreement for Local Cooperation are legal obligations of the \_\_\_\_\_ Levee District.

2. The \_\_\_\_\_ Levee District is financially solvent and has the legal and financial ability to undertake, carry out, and fulfill the Agreement for Local Cooperation.

3. The said \_\_\_\_\_ Levee District has on hand funds necessary to fulfill the Agreement for Local Cooperation, or monies or funds can be made available to carry out and fulfill them.

See Applicable State statutes and/or laws:

(Insert Statutes and/or Laws Here)

THIS the \_\_\_\_\_ day of \_\_\_\_\_, 199\_\_\_\_.

\_\_\_\_\_, Attorney  
\_\_\_\_\_, Levee District

Example 8

SAMPLE OF  
RESOLUTION PROVIDING RIGHT-OF-WAY

The following resolution was introduced by Commissioner \_\_\_\_\_, seconded by Commissioner \_\_\_\_\_, and unanimously adopted by the Board of Levee Commissioners, \_\_\_\_\_ Levee District to-wit:

WHEREAS, this Board is in receipt of a letter dated \_\_\_\_\_, from Real Estate Division, Vicksburg District, Corps of Engineers, 2101 North Frontage Road, Vicksburg, Mississippi 39180-5191, requesting right-of-way as shown on Exhibit "A" for Emergency \_\_\_\_\_, at \_\_\_\_\_, (Arkansas/ Mississippi/Louisiana).

THEREFORE, BE IT RESOLVED that the Board of Commissioners of Levee District in meeting convened on this the \_\_\_\_ day of \_\_\_\_\_, 199\_\_, does hereby make the necessary right-of-way as shown on the aforementioned map available free of all costs to the United States, for construction of emergency \_\_\_\_\_, and will hold harmless and blameless for any and all damages that may result from the proposed work.

BE IT FURTHER RESOLVED that \_\_\_\_\_, President of Board of Levee Commissioners, \_\_\_\_\_ Levee District, is hereby authorized and directed to execute and act on all instruments on behalf of said Board in connection with the granting of said right-of-way as shown on a map, Emergency \_\_\_\_\_, \_\_\_\_\_, (Arkansas/Mississippi/Louisiana), previously furnished the District.

ATTEST:

, President

, Secretary

CERTIFICATE

I, \_\_\_\_\_, Secretary of Board of Levee Commissioners,  
\_\_\_\_\_ Levee District, do hereby certify that the above is a true and correct copy of the  
Resolution adopted \_\_\_\_\_, 199 \_\_, by the said Board, at a regular business  
meeting, after due notice thereof, a full quorum being present for the transaction of  
business and voting and that the original of said Resolution is retained in the permanent  
records of this Board.

Given under my official hand and seal, on this the \_\_\_\_ day of \_\_\_\_\_, 199  
-.

(S E A L)

, Secretary

Example 9

SAMPLE OF  
ATTORNEY'S OPINION

STATE OF (Arkansas/Mississippi/Louisiana)

COUNTY/PARISH OF

I, \_\_\_\_\_, a duly qualified and licensed Attorney at Law in and for the State of (Arkansas/Mississippi/ Louisiana), and Attorney for the Board of Levee Commissioners of the \_\_\_\_\_ Levee District, do hereby certify that, in my opinion, the \_\_\_\_\_ Levee District has acquired good and sufficient interest for the right-of-way as shown on Exhibit "A" to the Resolution Providing Right-of-Way.

The right-of-way was acquired in accordance with provisions of the "Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646, as amended by Public Law 100-17).

\_\_\_\_\_, Attorney  
\_\_\_\_\_ Levee District

# **ANNEX E**

# **DISTRIBUTION**





# ANNEX E

## DISTRIBUTION

<u>U.S. ARMY CORPS OF ENGINEERS</u>	<u>NO. OF COPIES</u>
Chief of Engineers, ATTN: CECW-OE	1
Commander, CEMVD, ATTN: CEMVD-CO-E	1
Commander, Southwestern Division, ATTN: CESAD-ET-CR	1
Commander, St. Louis District, ATTN: CEMVS-CO-R	1
Commander, Memphis District, ATTN: CEMVM-CO-E	1
Commander, New Orleans District, ATTN: CEMVN-OD-R	1
Commander, Rock Island District, ATTN: CEMVR-EOC	1
Commander, St. Paul District, ATTN: CEMVP-CO-RB	1
Commander, Little Rock District, ATTN: CESWL-EM	1
Commander, Mobile District, ATTN: CESAM-EM	1
Director, USA Engineer Research & Development Center	1
 <u>VICKSBURG DISTRICT</u>	
CEMVK-DE/CEMVK-DD	2
CEMVK-PA	1
CEMVK-PR	1
CEMVK-ED	2
CEMVK-OD	2
CEMVK-OD-C	4
CEMVK-GAO	6
CEMVK-VIAO	6
CEMVK-IM-TO	2
 <u>LEVEE DISTRICTS</u>	
Board of Mississippi Levee Commissioners	1
City of Pine Bluff, Arkansas	1
ATTN: City Engineer	
Farely Lake Levee District	1
Fifth Louisiana Levee District	1
Frenchtown-Auburn Levee District	1
Jefferson County Levee District No. 3	1
New Gascony Levee District No. 1	1
Plum Bayou Levee District	1
Southeast Arkansas Levee District	1
Tensas Basin Levee District	1
City of Vicksburg, Mississippi	1



**LEVEE DISTRICTS** (cont'd)

**NO. OF COPIES**

Red River, Atchafalaya, and Bayou Boeuf Levee District, P.O. Box 288, Alexandria, LA 71301	1
Bond Consulting Engineers, 1000 School Drive Jacksonville, AR 72076	1
Rankin-Hinds Pearl River Flood and Drainage Control District	1
Bossier Levee District	1
Miller County Levee District	1
Garland City Levee District	1
McKinney Bayou Levee District	1
Hempstead County Levee District	1
Red River Levee District	1
Long Prairie Levee District	1
North Bossier Levee District	1
Campi Clarence Levee District	1
Nineteenth Louisiana Levee District	1
Caddo Levee District	1

**STATE AGENCIES**

Arkansas Office of Emergency Services, P.O. Box 758, Conway, AR 72032-0758	1
District Public Works Engr., LA. Office of Transportation and Development, Office of Public Works, P.O. Box 38, Shreveport, LA 71161	1
Director, Louisiana Office Of Emergency Preparedness, P.O. Box 44217, Baton Rouge, LA 70804	1
Director, Mississippi Emergency Management Agency 1410 Riverside Drive, P.O. Box 4501 Jackson, MS 39296-4501	1